

# 2012 I-Code Amendments

## (2016 Update)

### 2012 International Building Code

#### SECTION 113 BOARD OF APPEALS

**[A] 113.1 General.** Per the requirements of Section 2-295 of the Surprise Municipal Code. ~~In order to hear and decide appeals of orders, decisions or determinations made by the *building official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the applicable governing authority and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business.~~

**[A] 113.2 Limitations on authority.** ~~An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The board shall have no authority to waive requirements of this code.~~

**[A] 113.3 Qualifications.** ~~The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to building construction and are not employees of the jurisdiction.~~

**310.5.1 Care facilities within a dwelling.** Licensed care facilities for 10 or fewer persons receiving care that are within a single-family dwelling shall comply with the International Residential Code provided an automatic sprinkler system is installed in accordance with Section 903.1.3 or Section P2904 of the International Residential code. Assisted living homes shall meet the requirements of Section 425.

#### **Exceptions:**

1. Family Foster Homes and Foster Group Homes licensed by the State of Arizona Department of Economic Security
2. Group Homes for the Developmentally Disabled, which serves six or less residents and is licensed by the State of Arizona Department of Health Services.

**310.6 Residential Group R-4.** This occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive *custodial care*. The persons receiving care are capable of self-preservation, except as provided for *assisted living homes*. This group shall include, but not be limited to, the following:

Alcohol and drug centers  
*Assisted living homes*  
Congregate care facilities  
Convalescent facilities  
*Group homes*  
Halfway houses  
Residential board and *custodial care* facilities  
Social rehabilitation facilities

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code and Section 425.

**310.6.1. Condition 1.** This occupancy condition shall include facilities licensed to provide supervisory care services, in which occupants are capable of self-preservation by responding to an emergency situation without physical assistance from staff. Condition facilities housing more than 10 persons shall be classified as Group I-1

**310.6.2 Condition 2.** This occupancy condition shall include facilities licensed to provide personal or directed care services, in which occupants are incapable of self-preservation by responding to an emergency situation without physical assistance from staff. Condition 2 facilities housing more than 10 persons shall be classified as Group I-2.

**Exceptions:**

1. Family Foster Homes and Foster Group Homes licensed by the State of Arizona Department of Economic Security
2. Group Homes for the Developmentally Disabled, which serves less six or less residents and is licensed by the State of Arizona Department of Health Services.

**903.2 Where required.** *Approved* automatic fire sprinkler systems shall be required in all new commercial structures and buildings for which a permit is required or issued. Installation of the sprinkler system shall be in accordance with the requirements of NFPA 13, unless otherwise approved by the ~~Fire Marshal~~ Fire Code Official.

~~Existing buildings, structures and occupancies will not require retrofitting fire sprinkler systems to current code standards unless:~~

- ~~1. Occupant load is increased without increasing square footage.~~
- ~~2. Occupancy classification is changed to a higher hazard~~
- ~~3. Building fire resistance rating is decreased.~~
- ~~4. Original building foot print (square footage) is increased 50% or more~~

**Exceptions:**

1. Detached gazebos, ramadas, restrooms, and guardhouses and utility vaults.
2. Detached non-combustible covered parking not exceeding ~~15,000~~ 5,000 square feet with a minimum of 26 foot separation between covered structures.
3. Detached non-combustible canopies used exclusively for automotive, motor fuel- dispensing. Canopies where vehicles are attended, and in place on a temporary basis, for non-maintenance activities.
4. Detached non-combustible non-occupied water supply Booster Pump structures.

~~For the purposes of this section "TEMPORARY" is defined as any time period of less than 8 hours in any 24 hour time period.~~

**903.2.1.1 Group A-1.** An automatic sprinkler system shall be provided for Group A-1 occupancies. ~~where one of the following conditions exists:~~

- ~~1. The fire area exceeds 12,000 square feet (1115 m2).~~
- ~~2. The fire area has an occupant load of 300 or more.~~
- ~~3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.~~
- ~~4. The fire area contains a multitheater complex.~~

**903.2.1.2 Group A-2.** An automatic sprinkler system shall be provided for Group A-2 occupancies. ~~where one of the following conditions exists:~~

- ~~1. The fire area exceeds 5,000 square feet (464 m2).~~

- ~~2. The fire area has an occupant load of 100 or more.~~
- ~~3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.~~

**903.2.1.3 Group A-3.** An automatic sprinkler system shall be provided for Group A-3 occupancies. ~~where one of the following conditions exists:~~

- ~~1. The fire area exceeds 12,000 square feet (1115 m<sup>2</sup>).~~
- ~~2. The fire area has an occupant load of 300 or more.~~
- ~~3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.~~

**903.2.1.4 Group A-4.** An automatic sprinkler system shall be provided for Group A-4 occupancies. ~~where one of the following conditions exists:~~

- ~~1. The fire area exceeds 12,000 square feet (1115 m<sup>2</sup>).~~
- ~~2. The fire area has an occupant load of 300 or more.~~
- ~~3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.~~

**903.2.1.5 Group A-5.** An automatic sprinkler system shall be provided for Group A-5 occupancies in the following areas: concession stands, retail areas, press boxes and other accessory use areas. ~~in excess of 1,000 square feet (93 m<sup>2</sup>).~~

**903.2.2 Ambulatory care facilities.** An automatic sprinkler system shall be installed throughout the entire floor containing an ambulatory care facility. ~~where either of the following conditions exist at any time:~~

- ~~1. Four or more care recipients are incapable of self-preservation, whether rendered incapable by staff or staff has accepted responsibility for care recipients already incapable.~~
- ~~2. One or more care recipients that are incapable of self-preservation are located at other than the level of exit discharge serving such a facility.~~

~~In buildings where ambulatory care is provided on levels other than the level of exit discharge, an automatic sprinkler system shall be installed throughout the entire floor where such care is provided as well as all floors below, and all floors between the level of ambulatory care and the nearest level of exit discharge, including the level of exit discharge.~~

**903.2.3 Group E.** An automatic sprinkler system shall be provided for Group E occupancies, as follows:

- ~~1. Throughout all Group E fire areas greater than 12,000 square feet (1115 m<sup>2</sup>) in area.~~
- ~~2. Throughout every portion of educational buildings below the lowest level of exit discharge serving that portion of the building.~~

**Exception:** ~~An automatic sprinkler system is not required in any area below the lowest level of exit discharge serving that area where every classroom throughout the building has at least one exterior exit door at ground level.~~

**903.2.4 Group F-1.** An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy, where one of the following conditions exists:

- ~~1. A Group F-1 fire area exceeds 12,000 square feet (1115 m<sup>2</sup>).~~
- ~~2. A Group F-1 fire area is located more than three stories above grade plane.~~
- ~~3. The combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m<sup>2</sup>).~~
- ~~4. A Group F-1 occupancy used for the manufacture of upholstered furniture or mattresses exceeds 2,500 square feet (232 m<sup>2</sup>).~~

**903.2.4.1 Woodworking operations.** An automatic sprinkler system shall be provided throughout all Group F-1 occupancy fire areas that contain woodworking operations in excess of 2,500 square feet in area (232 m<sup>2</sup>) which generate finely divided combustible waste or which use finely divided combustible materials.

**903.2.5.3 Pyroxylin plastics.** An automatic sprinkler system shall be provided in buildings, or portions thereof, where cellulose nitrate film or pyroxylin plastics are manufactured, stored or handled in quantities exceeding 20 pounds (9 071 Kg) 400 pounds (45 kg).

**903.2.6 Group I.** An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

**Exceptions:**

- ~~1. An automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be permitted in Group I-1 facilities.~~

- ~~2. An automatic sprinkler system installed in accordance with Section 903.3.1.3 shall be allowed in Group I-1 facilities when in compliance with all of the following:~~
  - ~~2.1. A hydraulic design information sign is located on the system riser;~~
  - ~~2.2. Exception 1 of Section 903.4 is not applied; and~~
  - ~~2.3. Systems shall be maintained in accordance with the requirements of Section 903.3.1.2.~~
- ~~3. An automatic sprinkler system is not required where day care facilities are at the level of exit discharge and where every room where care is provided has at least one exterior exit door.~~
- ~~4. In buildings where Group I-4 day care is provided on levels other than the level of exit discharge, an automatic sprinkler system in accordance with Section 903.3.1.1 shall be installed on the entire floor where care is provided and all floors between the level of care and the level of exit discharge, all floors below the level of exit discharge, other than areas classified as an open parking garage.~~

**903.2.7 Group M.** An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy. ~~where one of the following conditions exists:~~

- ~~1. A Group M fire area exceeds 12,000 square feet (1115 m<sup>2</sup>).~~
- ~~2. A Group M fire area is located more than three stories above grade plane.~~
- ~~3. The combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m<sup>2</sup>).~~
- ~~4. A Group M occupancy used for the display and sale of upholstered furniture or mattresses exceeds 5,000 square feet (464 m<sup>2</sup>).~~

**~~903.2.8.1 Group R-3 or R-4 congregate residences.~~** ~~A MOD. NFPA 13D sprinkler system shall be installed in accordance with Section 903.3.1.3 shall be permitted in Group R-3 or R-4 congregate living facilities. If any portion of a patio has habitable space directly above the patio, the patio shall be equipped with sprinkler protection.~~

**903.2.8.1 Assisted living facility.** Modified NFPA 13D sprinkler system shall be required to be installed in accordance with Section 903.3.1.3. If any portion of a patio has habitable space directly above the patio, the patio shall be equipped with sprinkler protection.

Such systems shall consist of an electronically supervised valve located between the domestic water riser control valve and the sprinklers, and include concealed spaces containing combustible materials, and shall be equipped with a electrically supervised water flow switch and monitored by an approved Central Station, and shall sound an alarm at a constantly attended location inside the facility. The minimum listed electronic components for alarms shall consist of one auto dialer, and one interior horn/strobe and one exterior horn/strobe connected to the fire riser water-flow switch.

**Exceptions:**

1. Family Foster Homes and Foster Group Homes licensed by the State of Arizona Department of Economic Security.
2. Group Homes for the Developmentally Disabled, which when serves six or fewer residents and is licensed by the State of Arizona Department of Health Services.

**~~903.2.8.3 Group R, Division 3.~~** A Mod. NFPA 13D Residential Fire Sprinkler System shall be installed in Group R, Division 3 occupancies. If any portion of a patio or porch has habitable space directly above the patio or porch, the patio or porch shall have sprinkler protection.

**~~Exception:~~** Residential sprinklers may be omitted from Group R, Division 3 occupancies as long as the residence meets the required fire flows in accordance with Appendix B Table B105.1 Minimum Required Fire Flow and Flow Duration For Buildings.

**~~903.2.8.3.1 Sprinkle cost comparison.~~** The costs to install residential fire sprinklers shall be listed as one of the available options and show comparative installation costs.

**~~903.2.8.3.2 Display of fire sprinkler equipment.~~** The seller shall provide a full size display model of NFPA 13D automatic fire sprinkler system riser, control valves, and gauges in the sales office of each model home complex. A display model is not required if the sales office is equipped with a sprinkler system.

**~~903.2.8.3.3 Educational materials.~~** The seller shall provide each buyer with a copy of approved Fire Department educational material describing the benefits of a residential fire sprinkler system.

**~~903.2.8.3.4 Affidavit.~~** An affidavit signed by the buyer and the seller indicating a fire sprinkler option was offered and accepted, or refused shall be retained at the sales office and made available to the fire inspector for a period of one year from the date of transferring title to the buyer. A copy of the signed affidavit shall be attached to the application for permit.

**903.2.8.4 903.2.8.5 Special requirements for Group R-1 and R-2**

**occupancies.** Group R-1 and R-2 occupancies, sprinklers shall be installed in bathrooms, closet areas containing any electrical or mechanical equipment, foyers, and attached garages, accessible areas under interior stairs or landings, exterior balconies and covered patios or landings which have habitable space directly above the balconies, patio or porch. In living spaces, sprinklers shall be the concealed type. For the purpose of inspection, testing, or maintenance, there shall be provided, at the time of construction, an exterior access door on the side of the building next to the fire sprinkler riser of adequate size to allow for valves and gauges to be accessed, repaired and viewed from the exterior for testing and maintenance purposes. The dimensions of the access door will depend on the design of the fire riser, controls and gauges. When necessary, access shall be provided through private dwellings or garages so service personnel can maintain the fire sprinkler riser and equipment.

**~~903.2.8.5 Special requirements for Group R-4 occupancies. R-4~~**

~~occupancies, sprinklers shall be installed in bathrooms, closet areas containing any electrical or mechanical equipment, foyers, attached garages, and accessible areas under interior stairs or landings. State-licensed facilities shall be equipped with an approved automatic sprinkler system in accordance with this code.~~

**903.2.9 Group S-1.** An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy. ~~where one of the following conditions exists:~~

- ~~1. A Group S-1 fire area exceeds 12,000 square feet (1115 m<sup>2</sup>).~~
- ~~2. A Group S-1 fire area is located more than three stories above grade plane.~~
- ~~3. The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m<sup>2</sup>).~~
- ~~4. A Group S-1 fire area used for the storage of commercial trucks or buses where the fire area exceeds 5,000 square feet (464 m<sup>2</sup>).~~
- ~~5. A Group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2,500 square feet (232 m<sup>2</sup>).~~

**903.2.9.1 Repair garages.** An automatic sprinkler system shall be provided throughout all buildings used as repair garages. ~~in accordance with Section 406.8 of the International Building Code, as shown:~~



- ~~1. Buildings having two or more stories above grade plane, including basements, with a fire area containing a repair garage exceeding 10,000 square feet (929 m<sup>2</sup>).~~
- ~~2. Buildings no more than one story above grade plane, with a fire area containing a repair garage exceeding 12,000 square feet (1115 m<sup>2</sup>).~~
- ~~3. Buildings with repair garages servicing vehicles parked in basements.~~
- ~~4. A Group S-1 fire area used for the repair of commercial trucks or buses where the fire area exceeds 5,000 square feet (464 m<sup>2</sup>).~~

**903.2.9.2 Bulk storage of tires.** Buildings and structures where the area for the storage of tires. ~~exceeds 20,000 cubic feet (566 m<sup>3</sup>) shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.~~

~~**903.2.8.6**~~ **903.2.9.3 Special requirements for speculative warehouses.** Speculative warehouses shall comply with this Chapter, Chapter 23, and NFPA 13. The minimum sprinkler design in speculative warehouses shall be based upon a minimum class ~~IV~~ High Hazard commodity and maximum allowable storage height in the building. The system shall be hydraulically designed to protect the maximum possible clear height of storage without in-rack sprinklers and/or use an approved alternate design such as Early Suppression Fast Response (ESFR) sprinklers.

~~**903.3.7 Fire department connections.**~~ The location of fire department connections shall be approved by the fire code official. All signage shall be consistent with the Surprise Fire Department Emergency Access Book.

**906.1 Where required.** Portable fire extinguishers shall be installed in the following locations:

- ~~1. In new and existing Group A, B, E, F, H, I, M, R-1, R-2, R-4, and S occupancies.~~

~~**Exception:** In new and existing Group A, B, and E occupancies equipped throughout with quick-response sprinklers, portable fire extinguishers shall be required only in locations specified in Items 2 through 6.~~

- ~~2. Within 30 feet (9144 mm) of commercial cooking equipment.~~
- ~~3. In areas where flammable or combustible liquids are stored, used, or dispensed.~~
- ~~4. On each floor of structures under construction, except Group R-3 occupancies, in accordance with Section~~

~~1415.1.~~

~~5. Where required by the sections indicated in Table 906.1.~~

~~6. Special hazard areas, including but not limited to laboratories, computer rooms and generator rooms, where required by the fire code official.~~

**907.2 Where required – new buildings and structures.** All new commercial occupancies for which a building or construction permit is obtained shall ~~not~~ require full area smoke detection. ~~providing the building is equipped with a fully automatic fire sprinkler system.~~ Duct detection shall be required in accordance with *International Mechanical Code*. Full area notification shall be required and shall be addressable class A wiring. The fire riser flow switch shall be connected to and monitored by an approved monitoring company.

Self-storage facilities will not require the installation of smoke/heat detectors inside the storage compartment, but will require smoke detection in all common areas, and the installation of standpipes in stairwells in accordance with NFPA 13 and NFPA 14.

~~**907.4.2 Manual fire alarm boxes.** Manual fire alarm boxes shall not be installed in occupancies where the building is equipped throughout with an approved automatic sprinkler system, unless otherwise required by the Fire Marshal.~~

**912.2.1 Visible location.** Fire department connections shall be located on the entrance side of the building, 36 inches (91 cm) above grade, fully visible and recognizable from the street or nearest point of fire department vehicle apparatus access or as otherwise *approved by the Fire Marshal* Fire Code Official.

**912.2.1.1 Fire department connection on buildings.** Fire department connection shall be indicated with an approved sign mounted ~~84 inches~~ minimum of 7 feet (2133 mm) and maximum of 9 feet (2743 mm) above grade and recognizable from the street or nearest point of fire apparatus access.

**912.2.1.2 Remote fire department connection.** Remote fire department connection shall be indicated with an approved sign mounted 36 inches (91 cm) above grade and recognizable from the street or nearest point of fire apparatus access.

**912.2.3 Remote Fire Department Connection.** The remote Fire Department Connection shall be located on the entrance side of the building, outside the collapse zone and within 25 feet(7620 mm) of a fire hydrant

**912.4 Signs.** A metal sign with raised letters at least ~~1 inch (25 mm)~~ 2 inches (5 cm) in size shall be mounted on all Fire Department Connections serving ~~automatic fire~~ sprinklers, standpipes or fire pump connections. Such signs shall read: AUTOMATIC

SPRINKLERS or STANDPIPES or TEST CONNECTION or a combination thereof as applicable. Where the fire department connection does not serve the entire building, a sign shall be provided indicating the portions of the building served. All ~~signage shall be consistent with the Surprise Fire Department Emergency Access Detail Book.~~ When a building is served by multiple Fire Department Connections, each connection shall be provided with an approved sign detailing the area of the building served by each connection.

~~**1016.2.2 Group F-1 and S-1 Increase.** The maximum exit access travel distance shall be 400 feet (121 920 mm) in Group F-1 and S-1 occupancies where all of the following are met:~~

- ~~1. The portion of the building classified as Group F-1 or S-1 is limited to one story in height.~~
- ~~2. The minimum height from the finish floor to bottom of the ceiling or roof slab or deck is 24 feet (7315 mm); and~~
- ~~3. The building is equipped throughout with an automatic fire sprinkler system in accordance with Section 903.3.1.1 and Chapter 32 of this code.~~
- ~~4. Additional building access shall be provided in accordance with Sections 3206.6 through 3206.6.1.3 of this code.~~

~~**1016.2.2.1 Group F-1 and S-1 with a storage area greater than 500, 000 square feet.** Group F-1 and S-1 with a storage area greater than 500, 000 square feet, a Technical Report shall be prepared by an Arizona Professional and shall be submitted to the Fire Marshal Fire Code Official for approval.~~

# 2012 International Residential Code

## SECTION R112 BOARD OF APPEALS

**R112.1 General.** ~~Per the requirements of Section 2-295 of the Surprise Municipal Code. In order to hear and decide appeals of orders, decisions or determinations made by the *building official* relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The *building official* shall be an ex-officio member of said board but shall have no vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the *building official*.~~

**R112.2 Limitations on authority.** ~~An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The board shall have no authority to waive requirements of this code.~~

**~~R112.2.1 Determination of substantial improvement in flood hazard areas.~~**

~~When the *building official* provides a finding required in Section R105.3.1.1, the board of appeals shall determine whether the value of the proposed work constitutes a substantial improvement. A substantial improvement means any repair, reconstruction, rehabilitation, *addition* or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the market value of the building or structure before the improvement or repair is started. If the building or structure has sustained substantial damage, all repairs are considered substantial improvement regardless of the actual repair work performed. The term does not include:~~

~~1. Improvements of a building or structure required to correct existing health, sanitary or safety code violations identified by the *building official* and which are the minimum necessary to assure safe living conditions; or~~

~~2. Any alteration of an historic building or structure, provided that the alteration will not preclude the continued designation as an historic building or structure. For the purpose of this exclusion, an historic building is:~~

~~2.1. *Listed* or preliminarily determined to be eligible for *listing* in the National Register of Historic Places; or~~

~~2.2. Determined by the Secretary of the U.S. Department of Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined to qualify as an historic district; or~~

~~2.3. Designated as historic under a state or local historic preservation program that is approved by the Department of Interior.~~

**~~R112.2.2 Criteria for issuance of a variance for flood hazard areas.~~**

~~A variance shall be issued only upon:~~

- ~~1. A showing of good and sufficient cause that the unique characteristics of the size, configuration or topography of the site render the elevation standards in Section R322 inappropriate.~~
- ~~2. A determination that failure to grant the variance would result in exceptional hardship by rendering the lot undevelopable.~~
- ~~3. A determination that the granting of a variance will not result in increased flood heights, additional threats to public safety, extraordinary public expense, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances.~~
- ~~4. A determination that the variance is the minimum necessary to afford relief, considering the flood hazard.~~
- ~~5. Submission to the applicant of written notice specifying the difference between the design flood elevation and the elevation to which the building is to be built, stating that the cost of flood insurance will be commensurate with the increased risk resulting from the reduced floor elevation, and stating that construction below the design flood elevation increases risks to life and property.~~

**~~R112.3 Qualifications.~~** ~~The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to building construction and are not employees of the jurisdiction.~~

**~~R112.4 Administration.~~** ~~The building official shall take immediate action in accordance with the decision of the board.~~

**R314.3.1 Alterations, repairs and additions.** When *alterations*, repairs or *additions* requiring a *permit* occur, or when one or more sleeping rooms are added or created in existing *dwellings*, the individual *dwelling unit* shall be equipped with smoke alarms located as required for new *dwellings*.

**Exceptions:**

1. Work involving the exterior surfaces of *dwellings*, such as the replacement of roofing or siding, or the *addition* or replacement of windows or doors, or the *addition* of a porch or deck, are exempt from the requirements of this section.

3. Installation, *alteration* or repairs of plumbing or mechanical systems are exempt from the requirements of this section.

**N1102.4.1.2 (R402.4.1.2) Testing.** The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 5 air changes per hour in Zones 1 and 2, and 3 air changes per hour in Zones 3 through 8. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (50 Pascals). Where required by the *building official*, testing shall be conducted by an *approved* third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the *building official*. Testing shall be performed at any time after creation of all penetrations of the *building thermal envelope*.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures;
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures;
3. Interior doors, if installed at the time of the test, shall be open;
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;
5. Heating and cooling systems, if installed at the time of the test, shall be turned off; and
6. Supply and return registers, if installed at the time of the test, shall be fully open.

**Exception:**

Additions, alterations, renovations or repairs to existing structures.

**M1502.4.4 Dryer exhaust duct power ventilators.** Domestic dryer exhaust duct power ventilators shall conform to UL 705 for use in dryer exhaust duct systems. The dryer exhaust duct power ventilator shall be installed in accordance with the manufacturer's instructions.

**M1502.4.5 Duct length.** The maximum allowable exhaust duct length shall be determined by one of the methods specified in Sections M1502.4.5.1 through M1502.4.5.3.

**M1502.4.5.1 Specified length.** The maximum length of the exhaust duct shall be 35 feet (10 668 mm) from the connection to the transition duct from the dryer to the outlet terminal. Where fittings are used, the maximum length of the exhaust duct shall be reduced in accordance with Table M1502.4.5.1. The maximum length of the exhaust duct does not include the transition duct.

**TABLE M1502.4.5.1 DRYER EXHAUST DUCT FITTING EQUIVALENT LENGTH**

DRYER EXHAUST DUCT FITTING TYPE	EQUIVALENT LENGTH
4 inch radius mitered 45 degree elbow	2 feet 6 inches
4 inch radius mitered 90 degree elbow	5 feet
6 inch radius smooth 45 degree elbow	1 foot
6 inch radius smooth 90 degree elbow	1 foot 9 inches
8 inch radius smooth 45 degree elbow	1 foot
8 inch radius smooth 90 degree elbow	1 foot 7 inches
10 inch radius smooth 45 degree elbow	9 inches
10 inch radius smooth 90 degree elbow	1 foot 6 inches

For SI: 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 degree = 0.0175 rad.

**M1502.4.5.2 Manufacturer's instructions.** The size and maximum length of the exhaust duct shall be determined by the dryer manufacturer's installation instructions. The code official shall be provided with a copy of the installation instructions for the make and model of the dryer at the concealment inspection. In the absence of fitting equivalent length calculations from the clothes dryer manufacturer, Table 1502.4.5.1 shall be used.

**M1502.4.5.3 Dryer exhaust duct power ventilator.** The maximum length of the exhaust duct shall be determined in accordance with the manufacturer's instructions for the dryer exhaust power ventilator.

**M1502.4.6 Length Identification.** Where the exhaust duct equivalent length exceeds 35 feet (10 668 mm), the equivalent length of the exhaust duct shall be identified on a permanent label or tag. The label or tag shall be located within 6 feet (1829 mm) of the exhaust duct connection.

# 2012 International Mechanical Code

## SECTION 109 MEANS OF APPEAL

**[A] 109.1 Application for appeal. General.** Per the requirements of Section 2-295 of the Surprise Municipal Code. — A person shall have the right to appeal a decision of the code official to the board of appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The application shall be filed on a form obtained from the code official within 20 days after the notice was served.

**[A] 109.1.1 Limitation of authority.** The board of appeals shall have no authority relative to interpretation of the administration of this code nor shall such board be empowered to waive requirements of this code.

**[A] 109.2 Membership of board.** The board of appeals shall consist of five members appointed by the chief appointing authority as follows: one for five years; one for four years; one for three years; one for two years; and one for one year. Thereafter, each new member shall serve for five years or until a successor has been appointed.

**[A] 109.2.1 Qualifications.** The board of appeals shall consist of five individuals, one from each of the following professions or disciplines.

1. *Registered design professional who is a registered architect; or a builder or superintendent of building construction with at least 10 years' experience, five of which shall have been in responsible charge of work.*

2. *Registered design professional with structural engineering or architectural experience.*

3. *Registered design professional with mechanical and plumbing engineering experience; or a mechanical contractor with at least 10 years' experience, five of which shall have been in responsible charge of work.*

4. *Registered design professional with electrical engineering experience; or an electrical contractor with at least 10 years' experience, five of which shall have been in responsible charge of work.*

5. *Registered design professional with fire protection engineering experience; or a fire protection contractor with at least 10 years' experience, five of which shall have been in responsible charge of work.*

**[A] 109.2.2 Alternate members.** The chief appointing authority shall appoint two alternate members who shall be called by the board chairman to hear appeals during the absence or disqualification of a member. Alternate members shall



~~possess the qualifications required for board membership and shall be appointed for five years, or until a successor has been appointed.~~

~~**[A] 109.2.3 Chairman.** The board shall annually select one of its members to serve as chairman.~~

~~**[A] 109.2.4 Disqualification of member.** A member shall not hear an appeal in which that member has a personal, professional or financial interest.~~

~~**[A] 109.2.5 Secretary.** The chief administrative officer shall designate a qualified clerk to serve as secretary to the board. The secretary shall file a detailed record of all proceedings in the office of the chief administrative officer.~~

~~**[A] 109.2.6 Compensation of members.** Compensation of members shall be determined by law.~~

~~**[A] 109.3 Notice of meeting.** The board shall meet upon notice from the chairman, within ten days of the filing of an appeal, or at stated periodic meetings.~~

~~**[A] 109.4 Open hearing.** All hearings before the board shall be open to the public. The appellant, the appellant's representative, the code official and any person whose interests are affected shall be given an opportunity to be heard.~~

~~**[A] 109.4.1 Procedure.**~~

~~The board shall adopt and make available to the public through the secretary procedures under which a hearing will be conducted. The procedures shall not require compliance with strict rules of evidence, but shall mandate that only relevant information be received.~~

~~**[A] 109.5 Postponed hearing.** When five members are not present to hear an appeal, either the appellant or the appellant's representative shall have the right to request a postponement of the hearing.~~

~~**[A] 109.6 Board decision.** The board shall modify or reverse the decision of the code official by a concurring vote of three members.~~

~~**[A] 109.6.1 Resolution.** The decision of the board shall be by resolution. Certified copies shall be furnished to the appellant and to the code official.~~

~~**[A] 109.6.2 Administration.** The code official shall take immediate action in accordance with the decision of the board.~~

~~**[A] 109.7 Court review.** Any person, whether or not a previous party of the appeal, shall have the right to apply to the appropriate court for a writ of certiorari to correct~~

errors of law. Application for review shall be made in the manner and time required by law following the filing of the decision in the office of the chief administrative officer.

**TABLE 403.1.1.1 MINIMUM VENTILATION RATES**

OCCUPANCY CLASSIFICATION	OCCUPANT DENSITY #/1000 FT <sup>2</sup> <sup>a</sup>	PEOPLE OUTDOOR AIRFLOW RATE IN BREATHING ZONE, $R_p$ CFM/PERSON	AREA OUTDOOR AIRFLOW RATE IN BREATHING ZONE, $R_a$ CFM/FT <sup>2</sup> <sup>a</sup>	EXHAUST AIRFLOW RATE CFM/FT <sup>2</sup> <sup>a</sup>
<b>Specialty shops</b>				
Automotive motor-fuel dispensing stations <sup>b</sup>	—	—	—	1.5
Barber	25	7.5	0.06	0.5
Beauty salons <sup>b</sup>	25	20	0.12	0.6
Nail salons <sup>b, h</sup>	25	20	0.12	0.6
Embalming room <sup>b</sup>	—	—	—	2.0
Pet shops (animal areas) <sup>b</sup>	10	7.5	0.18	0.9
Supermarkets	8	7.5	0.06	—

**502.20 Manicure and pedicure stations.** Manicure and pedicure stations shall be provided with an exhaust system in accordance with Table 403.3.1.1 Nail Salons. Manicure tables and pedicure stations not provided with factory-installed exhaust inlets shall be provided with exhaust inlets located not more than 12 inches (305 mm) horizontally and vertically from the point of chemical application. For nail salons, each manicure and pedicure station shall be provided with a source capture system of capable of exhausting not less than 50 cfm per station. Where one or more required source capture systems operate continuously during occupancy, the exhaust rate from such systems shall be permitted to be applied to the exhaust flow rate required by Table 403.1.1.1 for the nail salon.

# 2012 International Plumbing Code

## SECTION 109 MEANS OF APPEAL

**[A] 109.1 Application for appeal. General.** ~~Per the requirements of Section 2-295 of the Surprise Municipal Code. Any person shall have the right to appeal a decision of the code official to the board of appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The application shall be filed on a form obtained from the code official within 20 days after the notice was served.~~

**[A] 109.2 Membership of board.** ~~The board of appeals shall consist of five members appointed by the chief appointing authority as follows: one for 5 years, one for 4 years, one for 3 years, one for 2 years and one for 1 year. Thereafter, each new member shall serve for 5 years or until a successor has been appointed.~~

**[A] 109.2.1 Qualifications.** ~~The board of appeals shall consist of five individuals, one from each of the following professions or disciplines:~~

- ~~1. Registered design professional who is a registered architect; or a builder or superintendent of building construction with at least 10 years' experience, 5 years of which shall have been in responsible charge of work.~~
- ~~2. Registered design professional with structural engineering or architectural experience.~~
- ~~3. Registered design professional with mechanical and plumbing engineering experience; or a mechanical and plumbing contractor with at least 10 years' experience, 5 years of which shall have been in responsible charge of work.~~
- ~~4. Registered design professional with electrical engineering experience; or an electrical contractor with at least 10 years' experience, 5 years of which shall have been in responsible charge of work.~~
- ~~5. Registered design professional with fire protection engineering experience; or a fire protection contractor with at least 10 years' experience, 5 years of which shall have been in responsible charge of work.~~

**[A] 109.2.2 Alternate members.** ~~The chief appointing authority shall appoint two alternate members who shall be called by the board chairman to hear appeals during the absence or disqualification of a member. Alternate members shall possess the qualifications required for board membership, and shall be appointed for 5 years or until a successor has been appointed.~~

~~[A] 109.2.3 Chairman.~~ The board shall annually select one of its members to serve as chairman.

~~[A] 109.2.4 Disqualification of member.~~ A member shall not hear an appeal in which that member has any personal, professional or financial interest.

~~[A] 109.2.5 Secretary.~~ The chief administrative officer shall designate a qualified clerk to serve as secretary to the board. The secretary shall file a detailed record of all proceedings in the office of the chief administrative officer.

~~[A] 109.2.6 Compensation of members.~~  
Compensation of members shall be determined by law.

~~[A] 109.3 Notice of meeting.~~ The board shall meet upon notice from the chairman, within 10 days of the filing of an appeal or at stated periodic meetings.

~~[A] 109.4 Open hearing.~~ All hearings before the board shall be open to the public. The appellant, the appellant's representative, the code official and any person whose interests are affected shall be given an opportunity to be heard.

~~[A] 109.4.1 Procedure.~~ The board shall adopt and make available to the public through the secretary procedures under which a hearing will be conducted. The procedures shall not require compliance with strict rules of evidence, but shall mandate that only relevant information be received.

~~[A] 109.5 Postponed hearing.~~ When five members are not present to hear an appeal, either the appellant or the appellant's representative shall have the right to request a postponement of the hearing.

~~[A] 109.6 Board decision.~~ The board shall modify or reverse the decision of the code official by a concurring vote of three members.

~~[A] 109.6.1 Resolution.~~ The decision of the board shall be by resolution. Certified copies shall be furnished to the appellant and to the code official.

~~[A] 109.6.2 Administration.~~ The code official shall take immediate action in accordance with the decision of the board.

~~[A] 109.7 Court review.~~ Any person, whether or not a previous party of the appeal, shall have the right to apply to the appropriate court for a writ of certiorari to correct errors of law. Application for review shall be made in the manner and time required by law following the filing of the decision in the office of the chief administrative officer.

# 2012 International Fuel Gas Code

## SECTION 109 (IFGC) MEANS OF APPEAL

**[A] 109.1 Application for appeal. General.** ~~Per the requirements of Section 2-295 of the Surprise Municipal Code. — A person shall have the right to appeal a decision of the code official to the board of appeals. An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The application shall be filed on a form obtained from the code official within 20 days after the notice was served.~~

**[A] 109.2 Membership of board.** ~~The board of appeals shall consist of five members appointed by the chief appointing authority as follows: one for five years; one for four years; one for three years; one for two years and one for one year. Thereafter, each new member shall serve for five years or until a successor has been appointed.~~

**[A] 109.2.1 Qualifications.** ~~The board of appeals shall consist of five individuals, one from each of the following professions or disciplines:~~

- ~~1. Registered design professional who is a registered architect; or a builder or superintendent of building construction with at least 10 years' experience, five of which shall have been in responsible charge of work.~~
- ~~2. Registered design professional with structural engineering or architectural experience.~~
- ~~3. Registered design professional with fuel gas and plumbing engineering experience; or a fuel gas contractor with at least 10 years' experience, five of which shall have been in responsible charge of work.~~
- ~~4. Registered design professional with electrical engineering experience; or an electrical contractor with at least 10 years' experience, five of which shall have been in responsible charge of work.~~
- ~~5. Registered design professional with fire protection engineering experience; or a fire protection contractor with at least 10 years' experience, five of which shall have been in responsible charge of work.~~

**[A] 109.2.2 Alternate members.** ~~The chief appointing authority shall appoint two alternate members who shall be called by the board chairman to hear appeals during the absence or disqualification of a member. Alternate members shall possess the qualifications required for board membership and shall be appointed for five years, or until a successor has been appointed.~~

~~[A] 109.2.3 Chairman.~~ The board shall annually select one of its members to serve as chairman.

~~[A] 109.2.4 Disqualification of member.~~ A member shall not hear an appeal in which that member has a personal, professional or financial interest.

~~[A] 109.2.5 Secretary.~~ The chief administrative officer shall designate a qualified clerk to serve as secretary to the board. The secretary shall file a detailed record of all proceedings in the office of the chief administrative officer.

~~[A] 109.2.6 Compensation of members.~~ Compensation of members shall be determined by law.

~~[A] 109.3 Notice of meeting.~~ The board shall meet upon notice from the chairman, within 10 days of the filing of an appeal, or at stated periodic meetings.

~~[A] 109.4 Open hearing.~~ All hearings before the board shall be open to the public. The appellant, the appellant's representative, the code official and any person whose interests are affected shall be given an opportunity to be heard.

~~[A] 109.4.1 Procedure.~~ The board shall adopt and make available to the public through the secretary procedures under which a hearing will be conducted. The procedures shall not require compliance with strict rules of evidence, but shall mandate that only relevant information be received.

~~[A] 109.5 Postponed hearing.~~ When five members are not present to hear an appeal, either the appellant or the appellant's representative shall have the right to request a postponement of the hearing.

~~[A] 109.6 Board decision.~~ The board shall modify or reverse the decision of the code official by a concurring vote of three members.

~~[A] 109.6.1 Resolution.~~ The decision of the board shall be by resolution. Certified copies shall be furnished to the appellant and to the code official.

~~[A] 109.6.2 Administration.~~ The code official shall take immediate action in accordance with the decision of the board.

~~[A] 109.7 Court review.~~ Any person, whether or not a previous party to the appeal, shall have the right to apply to the appropriate court for a writ of certiorari to correct errors of law. Application for review shall be made in the manner and time required by law following the filing of the decision in the office of the chief administrative officer.

# 2012 International Energy Conservation Code

## SECTION C109 BOARD OF APPEALS

**C109.1 General.** ~~Per the requirements of Section 2-295 of the Surprise Municipal Code. In order to hear and decide appeals of orders, decisions or determinations made by the code official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The code official shall be an ex officio member of said board but shall have no vote on any matter before the board. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business, and shall render all decisions and findings in writing to the appellant with a duplicate copy to the code official.~~

**C109.2 Limitations on authority.** ~~An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply or an equally good or better form of construction is proposed. The board shall have no authority to waive requirements of this code.~~

**C109.3 Qualifications.** ~~The board of appeals shall consist of members who are qualified by experience and training and are not employees of the jurisdiction.~~

**C408.3.1 Functional testing.** Testing shall ensure that control hardware and software are calibrated, adjusted, programmed and in proper working condition in accordance with the construction documents and manufacturer's installation instructions. The construction documents shall state the party who will conduct the required functional testing. Where required by the code official, an approved third party independent from the design or construction of the project shall be responsible for the functional testing and shall provide documentation to the code official certifying that the installed lighting controls meet the provisions of Section C405.

Where occupant sensors, time switches, programmable schedule controls, photosensors or daylighting controls are installed, the following procedures shall be performed:

1. Confirm that the placement, sensitivity and time-out adjustments for occupant sensors yield acceptable performance.
2. Confirm that the time switches and programmable schedule controls are programmed to turn the lights off.

3. Confirm that the placement and sensitivity adjustments for photosensor controls reduce electric light based on the amount of usable daylight in the space as specified.

**R402.4.1.2 Testing.** The building or dwelling unit shall be tested and verified as having an air leakage rate of not exceeding 5 air changes per hour in Climate Zones 1 and 2, and 3 air changes per hour in Climate Zones 3 through 8. Testing shall be conducted with a blower door at a pressure of 0.2 inches w.g. (50 Pascals). Where required by the *code official*, testing shall be conducted by an *approved* third party. A written report of the results of the test shall be signed by the party conducting the test and provided to the *code official*. Testing shall be performed at any time after creation of all penetrations of the *building thermal envelope*.

During testing:

1. Exterior windows and doors, fireplace and stove doors shall be closed, but not sealed, beyond the intended weatherstripping or other infiltration control measures;
2. Dampers including exhaust, intake, makeup air, backdraft and flue dampers shall be closed, but not sealed beyond intended infiltration control measures;
3. Interior doors, if installed at the time of the test, shall be open;
4. Exterior doors for continuous ventilation systems and heat recovery ventilators shall be closed and sealed;
5. Heating and cooling systems, if installed at the time of the test, shall be turned off; and
6. Supply and return registers, if installed at the time of the test, shall be fully open.

**Exception:**

Additions, alterations, renovations or repairs to existing structures.



# 2012 International Existing Building Code

## SECTION 112 BOARD OF APPEALS

**[A] 112.1 General.** Per the requirements of Section 2-295 of the Surprise Municipal Code.—In order to hear and decide appeals of orders, decisions, or determinations made by the code official relative to the application and interpretation of this code, there shall be and is hereby created a board of appeals. The board of appeals shall be appointed by the governing body and shall hold office at its pleasure. The board shall adopt rules of procedure for conducting its business.

**[A] 112.2 Limitations on authority.** An application for appeal shall be based on a claim that the true intent of this code or the rules legally adopted thereunder have been incorrectly interpreted, the provisions of this code do not fully apply, or an equally good or better form of construction is proposed. The board shall have no authority to waive requirements of this code.

**[A] 112.3 Qualifications.** The board of appeals shall consist of members who are qualified by experience and training to pass on matters pertaining to building construction and are not employees of the jurisdiction.

## 2012 International Fire Code

The International Fire Code, 2012 Edition is hereby amended as follows:

The following Appendices of the International Fire Code, 2012 Edition, are hereby adopted in their entirety.

The most recent Editions of the National Fire Codes and Standards published by the National Fire Protection Association (NFPA) as referenced in Chapter 80 of the International Fire Code 2012 edition and the most recent addition of the NFPA 101 Life Safety Code, together with all errata to those codes as adopted by NFPA from time to time.

- Appendix B - Fire-Flow Requirements for Buildings
- Appendix C - Fire Hydrant Location and Distribution
- Appendix D - Fire Apparatus Access Roads
- Appendix E - Hazard Categories
- Appendix F - Hazard Ranking
- Appendix G - Cryogenic Fluids, Weight and Volume Equivalents
- Appendix H - Hazardous Materials Management Plan (HMMP) and  
Hazardous Materials Inventory Statement (HMIS) Instructions
- Appendix I - Fire Protection Systems-Noncompliant Conditions
- ~~Appendix J - Building Information Sign~~

**[A] 101.1 Title.** These regulations shall be known as the Fire Code of City of Surprise, hereinafter referred to as “this code”.

**[A] 104.10 Fire investigations.** The Fire Code Official shall investigate or cause to be investigated the cause, origin and circumstance of each and every fire occurring in the jurisdiction involving loss of life or injury to a person or destruction or damage to property, and if it appears to the Fire Investigator that such fire is of suspicious origin, the Fire Investigator shall notify the ~~appropriate law enforcement agency~~ City of Surprise Police and shall secure the site until the ~~law enforcement agency~~ Police Department takes control of the site. Then, the ~~Fire~~ Police Investigator shall continue to pursue the investigation to its conclusion. Information that could be related to trade secrets or processes shall not be made part of the public record unless directed by a court of law.

**[A] 105.4.2 Information on construction documents.** Construction documents shall be drawn and submitted in accordance with the Arizona State Board of Technical Registration. Re-submittals, modifications or revisions shall include; revision date, identified by a Cloud Area and Delta; and shall include a response letter addressing each item. Electronic media documents are allowed to be submitted when approved by the ~~Fire Marshal~~ Fire Code Official. Construction documents shall be of sufficient

clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations as determined by the ~~Fire Marshal~~ Fire Code Official.

~~[A] 105.6.47 Trade shows and exhibits in buildings or structures.~~ An operational permit is required to operate a trade show or exhibit in a building or structure.

**106.5 Self-Inspection.** The *Fire Code Official* is authorized to establish a self-inspection program as deemed necessary to ensure compliance with the provisions of this code.

**106.5.1 Authorization to perform self-inspection.** The *Fire Code Official* shall make a determination of buildings or business owners that may perform self-inspections. These owners shall be invited to participate in the self-inspection process.

**106.5.2 Conducting self-inspections.** Upon approval by the *Fire Code Official*, the building or business owner and their authorized representative shall perform and document in the approved format the self-inspection. The results of the self-inspection shall be electronically submitted to the City of Surprise Fire-Medical Department, Fire Prevention within fifteen days of the completed inspection date.

**108.1 Right to appeal.** The person having standing may appeal the fire code violation under City of Surprise Code of Ordinances.

## **SECTION 202 DEFINITIONS**

**ASSISTED LIVING CENTER.** An assisted living facility that provides resident rooms or residential units to eleven or more residents.

**ASSISTED LIVING FACILITY.** A residential care institution, including adult foster care, that provides or contracts to provide supervisory care services, personal care services or directed care services on a continuing basis.

**ASSISTED LIVING HOME.** An assisted living facility that provides resident rooms to ten or fewer residents.

**ATTENDANT.** A person knowledgeable in the use of portable fire extinguishers, whose duty it is to maintain fire safety measures during public or private events, as prescribed.

**AUTHORITY HAVING JURISDICTION.** ~~The City of Surprise Fire Marshal or his designated representative.~~ The City of Surprise Fire-Medical Department *Fire Chief* or designee.

**~~CHIEF OF THE DIVISION OF FIRE PREVENTION.~~** The Fire Marshal.

**~~COLLAPSE ZONE.~~** The area around the perimeter of a structure that could contain debris if the building collapsed. Establishing the perimeter distance from the building is equal to 1.5 times the height of the structure

**~~CORPORATION LEGAL COUNSEL.~~** The City Attorney.

**~~CUSTODIAL CARE.~~** Assistance with day-to-day living tasks; such as assistance with cooking, taking medication, bathing, using toilet facilities and other tasks of daily living. Custodial care include occupants who evacuate at a slower rate and/or who have mental or psychiatric complications.

**~~DIVISION OF FIRE PREVENTION.~~** The Fire Marshal's Office.

**~~DRIVE LENGTH.~~** The distance from the driveway entrance to the structure measured in feet.

**~~FIRE CODE OFFICIAL.~~** The fire marshal, who is the designated authority charged with the administration and enforcement of the code, or a duly authorized representative.

**~~GRADE.~~** The degree of inclination of a slope, road or other surface (see slope).

**~~HORIZONTAL (YARD) STANDPIPE.~~** Approved water supply piping that extends the source of potable water to remote locations around the exterior of a structure.

**~~HOSE LAY.~~** The maximum length of a hand held hose line (fire hose) extended from fire apparatus 200 feet (60 900 mm) around the perimeter of a structure. If the hose lay is more than 200 feet (60 900 mm) from the road to all portions of the exterior, an Operational Platform is required.

**~~MODIFIED (Mod) NFPA 13D SPRINKLER SYSTEM.~~** In addition to NFPA 13D, sprinkler heads shall be installed in bathrooms, closet areas containing any electrical or mechanical equipment, accessible areas under interior stairs or landings, foyers, enclosed patios and porches, hidden spaces, attics, spaces under egress stairways, and in attached garages. A one-inch (25 mm) domestic water supply line and meter is required.

**~~MODIFIED (Mod) NFPA 13R FIRE SPRINKLER SYSTEM.~~** In addition to NFPA 13R, sprinkler heads shall be installed bathrooms, closet areas containing any electrical or mechanical equipment, areas under interior stairs or landings, foyers in enclosed patios and porches, hidden spaces, attics, spaces under egress stairways, and in garages. A one-inch (25 mm) domestic water supply line and meter is required.

**~~OCCUPANCY CLASSIFICATION.~~** For the purpose of this code, occupancies are defined and amended as follows:

**RESIDENTIAL GROUP R-4.** This occupancy shall include buildings, structures or portions thereof for more than five but not more than 16 persons, excluding staff, who reside on a 24-hour basis in a supervised residential environment and receive *custodial care*. The persons receiving care are capable of self-preservation, except as provided for *assisted living homes*. This group shall include, but not be limited to, the following:

- Alcohol and drug centers
- Assisted living homes*
- Congregate care facilities
- Convalescent facilities
- Group homes*
- Halfway houses
- Residential board and *custodial care* facilities
- Social rehabilitation facilities

Group R-4 occupancies shall meet the requirements for construction as defined for Group R-3, except as otherwise provided for in this code and the 2012 International Building Code Section 425 (amended).

**Condition 1.** This occupancy condition shall include facilities licensed to provide supervisory care services, in which occupants are capable of self-preservation by responding to an emergency situation without physical assistance from staff. Condition facilities housing more than 10 persons shall be classified as Group I-1

**Condition 2.** This occupancy condition shall include facilities licensed to provide personal or directed care services, in which occupants are incapable of self-preservation by responding to an emergency situation without physical assistance from staff. Condition 2 facilities housing more than 10 persons shall be classified as Group I-2.

**Exceptions:**

1. Family Foster Homes and Foster Group Homes licensed by the State of Arizona Department of Economic Security.
2. Group Homes for the Developmentally Disabled, which serves six or less residents and is licensed by the State of Arizona Department of Health Services.

**~~PAVED SURFACE.~~** ~~A surface of concrete, asphalt, pavers, or other material designed to support fire apparatus in excess of 75,000 pounds GVW under any weather condition.~~

**~~PERMENANT ALL WEATHER SURFACE (PAWS).~~** A road surface made up of approved materials compacted to 90% with side containment, and capable of supporting fire apparatus vehicles in excess of 75,000 pound gross vehicle weight (GVW) under any weather condition. The permanent all weather surface shall be maintained by the property owner for intended use by the fire department.

**SKY LANTERN.** A device designed to carry an open flame as an airborne light. Also known as but not limited to Kongming Lantern, Whish Lantern, Sky Candle, Fire Balloon.

**~~SLOPE.~~** The ground, road or other surface that forms a natural or artificial incline. The percentage of slope is determined by dividing the rise by the horizontal run multiplied by 100 [% slope = (Rise/Run) X 100].

**~~STREET VALVE.~~** An ON/OFF valve located in the street used to control the flow of water to a fire hydrant.

**~~UNLAWFUL.~~** A violation of this code, which may be punished by a civil penalty or a criminal penalty, however no person may be punished for the same offense by both a civil and criminal penalty.

**308.4 Sky Lanterns.** The lighting of and/or release of Sky Lanterns is prohibited.

**503.1.1 Buildings and facilities.** *Approved* fire apparatus access roads shall be provided for every facility, building or portion of a building hereafter constructed or moved into or within the jurisdiction. The fire apparatus access road shall comply with the requirements of this section and shall extend to within ~~200 feet (60 960 mm)~~ 150 feet (45 720mm) of all portions of the facility or all portions of the exterior walls of the first story of the building as measured by an *approved* route around the exterior of the building or facility, and within ~~200 feet (60 960 mm)~~ 150 feet (45 720mm) of the center of the furthest room on the second floor or level from the access road for buildings with two or more floors. Travel shall be measured along normal pedestrian routes. One flight of stairs shall count as 30 feet (9144 mm).

**Exceptions:** The Fire Marshal *Fire Code Official* is authorized to increase the dimension of ~~200 feet (60 960 mm)~~ 150 feet (45 720mm) where:

~~2.~~ 1. Fire apparatus access roads cannot be installed due to location on property, topography, waterways, non-negotiable grades or other similar conditions, and an approved alternative means of fire protection is provided.

~~3.~~ 2. There are not more than two Group R-3 or Group U occupancies.

**503.2.1 Dimensions.** Fire apparatus access roads shall have an unobstructed width of not less than ~~20 feet (6096 mm)~~, 26 feet (7925 mm), exclusive of shoulders, except for

approved security gates in accordance with Section 503.6, and an unobstructed vertical clearance of not less than ~~13 feet 6 inches (4115 mm)~~ 15 feet (4572 mm).

**503.2.5 Dead ends.** Dead-end fire apparatus access roads in excess of ~~200 feet (60 960 mm)~~ 150 feet (45 720 mm) in length shall be provided with an approved area for turning around fire apparatus. Dead-end fire apparatus access roads located between buildings shall have a 10-foot (3048 mm) setback from the edge of the access road to the structures on each side of the road.

**503.3 Marking.** Where required by the by the Fire Code Official, *approved* signs ~~that include the words NO PARKING-FIRE LANE~~ with red curb markings and other approved notices shall be provided for fire apparatus access roads to identify such roads and prohibit the obstruction thereof. Signs, notices and red curb markings shall be maintained in a clean and legible condition at all times, and be replaced, repaired or repainted when necessary to provide adequate visibility. All signage to be consistent with the requirements in the Surprise Fire Department Emergency Access Detail book.

~~**503.4 Obstruction of fire apparatus access roads.** Fire apparatus access roads shall not be obstructed in any manner, including the parking of vehicles. For the purposes of this section, parking is defined as stopped vehicles with no driver occupying the driver's position. Other occupants of the vehicle do not count as the driver. The minimum widths and clearances established in Section 503.2.1 shall be maintained at all times. The person in possession of the premises shall be responsible to ensure that fire apparatus access roadways are unobstructed at all times.~~

~~**503.6 Security gates.** Plans to install security gates across fire apparatus access roads shall include Tomar preemption equipment and be submitted to the fire department for review. When security gates are approved all means of emergency operation shall be provided and maintained. All gates shall be consistent with the requirements in the Surprise Fire Department Emergency Access Book.~~

~~Gates installed across fire apparatus access roads at gated communities and where required, shall be electronic with battery backup, and shall be provided with approved Tomar preemption equipment, controls, electronic Knox key switch and manual release mechanism.~~

~~Existing gates at entry points into gated communities and where required, shall be upgraded to include electronic preemption equipment, as required, within one year of the effective date of this code.~~

The installation of security gates across a fire apparatus access road shall be intended for automatic operation shall be designed, constructed and installed to comply with the requirements of ASTM F 2200. The electric gate shall be have battery backup, and shall be provided with electronic preemption equipment, controls, electronic Knox key switch and approved manual release mechanism. The security gates and the emergency shall

be maintained operational at all times. Electric gate operators, where provided, shall be listed in accordance with UL 325.

**Exception:** Manual security gates may be used across fire apparatus access roads with prior approval of the *Fire Chief*.

**503.6.1 Clear width.** Clear width of the roadway shall be minimum of ~~20 feet (6096 mm)~~ 26 feet (7925 mm) and clear width at all entrances shall be minimum of 20 feet (6096 mm). Exit roadways shall be a minimum of ~~46 feet (4878 mm)~~ 20 feet (6096) clear width, unless otherwise required by the Fire Marshal *Fire Code Official*.

**503.6.2 Divided entrance.** Sub-divisions may have a combination divided entrance and exit. The Entrance Gate shall have a clear width of 20 feet (6096 mm) and the Exit Gate shall have ~~46 feet (4878 mm)~~ 20 feet (6096 mm) clear width. Gates shall be designed to fit the opening.

**503.6.3 Gates.** Gates shall be designed and installed so that the turning radius (SU-40) of the roadway shall not interfere or obstructed the operation of the gate. Minimum set back from the public streets shall be a distance determined by the City Engineering Department and allow the emergency vehicle the ability to safely operate the lock box or panel. Turning radius from the right-of-way onto a public or private access roadway, shall be designed utilizing the SU-40 standard.

**503.6.4 Location of access controls.** The control pedestal shall be located on the approach (ingress) side of the gate and be located and designed for easy activation by the operator without leaving the vehicle. The maximum height of the control box shall be ~~66 inches~~ 5 feet 6 inches (1676 mm) measured from the finished grade.

~~**503.6.5 Traffic preemption device.** Approved traffic preemption devices (TOMAR) shall be installed on all gates providing security access at gated communities and where required by the Fire Marshal *Fire Code Official*.~~

**503.6.5 Gate timing.** Gates must fully open within 15 seconds of activation and remain open until closed by operation of the control device.

~~**503.6.6 Gate timing.** Gates must fully open within 15 seconds of activation and remain open until closed by operation of the control device.~~

**503.6.6 Control pedestal.** The control pedestal must be identified by a metal sign 6 inches X 10 inches (15 cm X 25 cm) with red background-white letters. The sign must be securely fastened to the pedestal and legible from the approaching vehicle. Fire apparatus access gates shall fail-safe to the open position in the event of a power failure.



**~~503.6.7 Control pedestal.~~** The control pedestal must be identified by a metal sign 6 inches X 10 inches (15 cm X 25 cm) with red background white letters. The sign must be securely fastened to the pedestal and legible from the approaching vehicle. ~~Fire apparatus access gates shall fail safe to the open position in the event of a power failure.~~

**503.6.7 Secondary access.** In addition to primary gates, secondary fire apparatus access gates, when required, shall be installed for additional Fire-Medical Department emergency access. Exit Only Gates shall have a minimum clearance of 20 feet (6096 mm) clear width and be posted with a sign that states "Caution Gate Opens Out" and the pavement shall be painted with a 5 inch (13 cm) wide yellow strip showing the depth of the gate swing.

**~~503.6.9 Preemption device operation.~~** Operation of the gate shall be by electronic preemption equipment installed on fire apparatus and/or by electronic Knox key switch.

**503.6.9 Existing Security gates.** Existing gates at entry points into gated communities shall be electric with battery backup, and shall be provided with electronic preemption equipment, controls, electronic Knox key switch and manual release mechanism approved by the *Fire Chief*.

**~~503.7 Graphic directories.~~** Approved graphic directories shall be provided at all driveway entrances for all multiple dwelling complexes, mobile home parks, or when required by the Fire Marshal. Directories shall be illuminated internally and consistent with the City of Surprise sign design standards, and be approved by the Fire Marshal. Existing facilities shall provide internally illuminated graphic directories within one year of the effective date of this code.

**~~505.1 Address identification.~~** New and existing buildings shall have approved address numbers as defined by the City of Surprise Code of Ordinances. ~~New and existing buildings shall have approved address numbers, building numbers or approved building identification placed in a position so that the number is plainly legible and visible from the street or road fronting the property. Commercial and Residential address numbers shall be located on the building at a point closest to the street as approved by the Fire Marshal Fire Code Official.~~

~~Commercial Building address numbers shall be black or contrasting in color. Tenant space numbers or letters shall be black or contrasting color, 4 inches in height, 1 inch in width, and shall be displayed on or above the front door and on or above the rear door so that identification is plainly legible and visible from the street or road fronting the property. See Table 1 for size of commercial address numbers based on distance from the roadway fronting the property.~~

## **Table 1 Commercial Address**

Table 1

<del>0 to 50 feet (15 240 mm). Numbers shall be a minimum 9 inches (230 mm) in height, 2-inches (50.8 mm) in width.</del>
<del>51 (15 545 mm) to 100 feet (30 480 mm). Numbers shall be a minimum 12 inches (305 mm) in height, 3 inches (76.2 mm) in width.</del>
<del>101 feet (30 785mm) or more. Numbers shall be a minimum 15 inches (375 mm) in height, 4-inches (101.6 mm) in width.</del>

~~The location of address numbers for a Single-Family dwelling shall be located so that the address is plainly legible and visible from the street or road fronting the property, contrasting in color, and numbers shall be a minimum 4 inches (101.6 mm) in height, ½ inch (12.7 mm) in width, and shall be displayed on the front of the dwelling on “front-loaded properties” and on the rear of “rear-loaded” properties.~~

~~Residential (Multi-Family Units). Apartment address numbers shall be color contrasting and located on the building at the closest point to the roadway so that the number is plainly legible and visible from the street or road fronting the property. See Table 2 for residential application.~~

## **Table 2 Residential Multi-family Unit Addressing**

Table 2

<del>0 to 50 feet (15 240 mm), numbers shall be a minimum 4 inches (101.6 mm) in height.</del>
<del>50 feet (15 240 mm) or more, numbers shall be 6 inches (152.5 mm) in height.</del>

~~**Apartment Building & Door Numbers.** Apartment building numbers are to be contrasting in color, a minimum seven inches (177.5 mm) in height with a one inch (25.4 mm) brush stroke. Numbers on apartment doors shall be a minimum of four inches (101.6 mm) in height with a five-eighths (5/8) inch (16 mm) brush stroke and contrasting in color. Numbers shall not be repeated. See Table 2.1 for example.~~

Table 2.1

301—310	3 <sup>rd</sup> Floor
201—210	2 <sup>nd</sup> Floor
101—110	1 <sup>st</sup> Floor

**506.1.3 Location.** A minimum of one recessed Knox Box is required for each occupancy at the time of construction or when required by the ~~Fire Marshal~~ Fire Code Official. Additional Knox Boxes may be required due to the unique design, location, and accessibility, water supply, square-footage, and type of business process.

A key for each tenant space entrance is required at the time of construction but prior to certificate of occupancy. The key provided shall open all exterior and interior doors of the structure, including the fire sprinkler and alarm room and alarm panel. All keys shall be labeled for recognition and placed inside the Knox box.

The Knox box shall be located on the left side of the main entrance. ~~The~~ top of the box shall be 60 inches above finished grade, or located as approved by the ~~Fire Marshal~~ Fire Code Official.

**Exception:** If the complex is served by one master key, one key will be sufficient.

**506.1.4 Knox box.** The Knox Box devices utilized by the ~~Fire-Medical~~ Department shall be the Knox Box, Knox Padlock, or Knox Key Switch. Approved devices authorized by ~~the City of Surprise Fire-Medical~~ Department are shown on the official Knox Box forms.

**506.2 Key box maintenance.** The owner, operator, or property manager of the building shall immediately notify the City of Surprise Fire-Medical Department, Fire Prevention when a lock set and/or key is changed or modified. The new key shall be provided and secured inside the key box by the Fire Inspector.

**507.1 Required water supply.** An approved water supply capable of supplying the required fire flow for fire protection shall be provided to premises upon which facilities, building or portions of buildings are hereafter constructed or moved into or within the jurisdiction. Where property is subdivided with or without the creation of public or private streets for the express purpose of providing said subdivided parcels for sale or otherwise permitting separate and/or individual development to occur, an approved water supply capable of supplying the projected fire flow for fire protection shall be provided and extended to serve directly any and all subdivided properties. The projected fire flow will be based on the greatest potential demand posed by any

type of occupancy allowed by zoning laws on the proposed property. Required water supply shall not be interrupted, for any reason, without prior approval of the Fire Marshal Fire Code Official.

**507.4.1 Flow Test Documentation.** It is the responsibility of Developer/Builder to submit fire flow test data to the City of Surprise Fire-Medical Department. Detailed test result data shall be provided to the fire department in an electronic format, acceptable by the ~~Fire Marshal~~ Fire Code Official.

**Use the following tables and references:**

1. Use Table B105.1 2012 IFC for Fire Flow and Duration for buildings.
2. Use Table C105.1 2012 IFC for Number and Distribution of Fire Hydrants.
3. Use IFC Section B105.2 Buildings other than one- and two family dwellings.

**507.4.2 Certificate of occupancy.** Certificate of Occupancy for any structure shall not be issued prior to final approval of the water supply system by the ~~Fire Marshal~~ Fire Code Official.

**507.5.1 Where required.** Where a portion of the facility or building hereafter constructed or moved into or within the jurisdiction is more than 400 feet (122 m) from a hydrant on a fire apparatus access road, as measured by an *approved* route around the exterior of the facility or building, on-site fire hydrants and mains shall be provided where required by the *Fire Code Official*.

**Exceptions:**

1. ~~For Group R-3 and Group U occupancies, the distance requirement shall be 600 feet (183 m).~~
2. ~~For buildings equipped throughout with an *approved automatic sprinkler system* installed in accordance with Section 903.3.1.1 or 903.3.1.2, the distance requirement shall be 600 feet (183 m).~~

~~**507.5.2 Inspection, testing and maintenance.** Fire hydrant systems shall be subject to periodic tests as required by the Fire Marshal. Fire hydrant systems shall be maintained in an operative condition at all times and shall be promptly repaired or replaced where defective.~~

~~All additions, repairs, or alterations of a water supply and fire hydrant systems shall comply with nationally recognized standards and be approved by the Fire Marshal and any other applicable city departments.~~

Fire hydrant systems shall be subject to periodic tests as required by the *Fire Code Official*. Fire hydrant systems shall be maintained in an operative condition at all times and shall be repaired where defective. Additions, repairs, *alterations* and servicing shall comply with *approved* standards.

**507.5.2.1 Required installations.** Fire hydrants installed as a result of a permit or work-order shall be spaced so that short hose lines can be utilized and so there is a sufficient number of fire hydrants within a reasonable distance to obtain the required fire flow as determined by Appendix B, IFC 2012 Edition.

In other than single-family residential areas, hydrants shall be spaced so that they are not more than 500 feet (152 400 mm) apart. For one- and two-family dwellings, hydrants shall be spaced so that they are not more than 500 feet (152 400 mm) apart and not more than 400 feet (121 920 mm) hose lay from the center of any structure. Hydrant spacing and hose lay requirements may be modified by the ~~Fire Marshal~~ Fire Code Official.

**507.5.2.2 Private and Municipal Fire Hydrants.** All fire hydrants shall be flushed and serviced and maintained annually in accordance with NFPA25 and the American Water Works Association- Manual of Water Supply Practices, Installation Field Testing and Maintenance of Fire hydrants. With assistance from the water company, the ~~Fire Marshal~~ Fire Code Official shall determine the number of fire hydrants to be tested in accordance with test procedures outlined in the American Water Works Association Manual of Water Supply Practices, Distribution System Requirements for Fire Protection, AWWA M31. Results of the testing shall be provided to the fire department in an electronic format acceptable to the ~~Fire Marshal~~ Fire Code Official.

**507.5.2.3 Fire Hydrants.** All fire hydrants designed and installed shall be in accordance with AWWA recognized standards and shall be capable of delivering the required fire flow, and shall be equipped with two 2½ inch (6.35 cm) outlets and one 4½ inch (11.43 cm) outlet. All outlets shall have National Standard Threads (NST).

**507.5.3 Private fire service mains and water tanks.** Private fire service mains and water tanks shall be periodically inspected, tested and maintained in accordance with NFPA 25; at the following intervals:

1. Private fire hydrants (all types): Inspection annually and after each operation; flow test and service annually.
2. Fire service main piping: Inspection of exposed, annually; flow test every five (5) years.
3. Fire service main piping strainers: Inspection and maintenance after each use.
4. Fire hydrant systems. Plans and specifications for fire hydrant systems shall be submitted to the fire department for review and approval prior to City Council action on the final subdivision plat, or in the case of an individual building or structure, for review and approval prior to issuance of the building permit.

**507.5.7 Marking Hydrants.** Public and private fire hydrants shall be classified in accordance to the water pressure in each hydrant so the fire department can immediately implement the correct pumping operation and compensate for very low pressure or extremely high pressure situation at the supply hydrant.

**507.5.7.1 Classification Code of Hydrants.** Hydrant tops and caps shall be painted with the following pressure-indicating color scheme table.

Green	Over 120 psi	Extremely high pressure (caution)
Orange	50-120 psi	Normal pressure range
Red	Below 50 psi	Must be pumped

**507.5.7.2 Color Legend.** The following colors will be used for hydrant tops and nozzle caps.

- Green – OSHA Safety Green
- Orange – OSHA Safety Orange
- Red – OSHA Safety Red

~~Water service providers, whether municipal or private, shall submit a map identifying the location of fire hydrants within the service area of the water provider. The map required under this subsection shall be submitted on or before December 31, of each year, and shall be updated by the water service provider as new fire hydrants are installed. On May 31, of each subsequent year, a map identifying the location of the fire hydrants within the service area of the water provider shall be submitted to the Fire Marshal. In the event a water service provider fails to submit the map required under subsection 5 of this section, the Fire Marshal is authorized to prepare a map of the fire hydrant locations within the service area of water service provider, and charge the cost of preparation of the map to the water service provider, together with an administrative fee equal to 15 percent of the cost of preparation of the map.~~

~~A water service provider, whether municipal or private, having a portion of its service area in which no distribution or service lines are located, shall identify such areas on the map required by this subsection. Such areas shall be exempt from the requirements of Sections 508.1 through 508.4 and Appendix B and C until distribution or service lines are installed by the water service provider.~~

~~On or before December 31, of each year, a water service provider, whether municipal or private shall have prepared and filed with the fire department, a plan that: Indicates sufficient hydrants on all streets within its water service area containing water utility distribution or service lines to comply with the requirements of International Fire Code, Appendix C Fire Hydrant Locations and Distribution, including but not limited to Table C105.1 or, a five year Capital Improvement Plan indicating plans for the construction of sufficient hydrants on all streets within it water~~

~~service area containing water utility distribution or service lines to comply with the requirements of 2012 International Fire Code, Appendix C Fire Hydrant Locations and Distribution, including but not limited to Table C105.1 within five (5) years from the date of submission of the plan.~~

~~On or before January 10, of each year following submission of the plan, the Fire Marshal shall file with the City Clerk, the Director of Community and Economic Development and Division Managers of Water Services, Engineering, and applicable water provider, a written notice indicating each water service provider who is not in compliance with the requirements of subsection 5 of this code. Upon filing of the written notice with the City Clerk, no building permit shall be issued within the service area of a water service provider who is not in compliance with the requirements of subsection 5 of this code.~~

~~A water service provider that believes a notice has been improperly issued under this section, may appeal the issuance of the notice to the City Manager, by filing a written notice of appeal to the City Manager within ten (10) days after filing of the Notice with the City Clerk. The City Manager or his/her designee shall hold a hearing on the appeal within thirty (30) days after filing of the appeal.~~

**510.1.1 Required Installation.** Buildings greater than 10,000 square feet (929 0304 sq. m) or where it is determined by the *Fire Code Official* that a radio coverage system is required..

**Exception:** When a certification of coverage is provided based on testing performed by a RF Engineer approved by the *Fire Code Official*.

**510.1.2 Planning.** The following information shall be provided to the *Fire Code Official* at second submittal of construction documents.

**510.1.2.1 Construction Drawings.** Showing location of the amplification equipment and associated antenna systems and views of access to the equipment.

**510.1.2.2 Schematic Drawings.** Showing the electrical, backup power, antenna system and any associated equipment relative to the amplification equipment including panel location and labeling.

**510.2 Emergency responder radio coverage in existing buildings.** Existing buildings shall be provided with approved radio coverage for emergency responders as required by the *Fire Code Official* or as required in Chapter 11.

**510.5.3.1 Test Certification.** Test results and proof of compliance shall be provided to the *Fire Code Official* prior to receiving Fire Certification of Occupancy.

**510.5.3.2 Test Frequency.** Tests shall use frequencies close to the frequencies used by the City of Surprise Fire-Medical Department. If testing is performed on tactical frequencies, then testing must be coordinated with and approved by the *Fire Chief* or his designee.

**605.1.1 Electrical service shut off access.** Where electrical service shut off controls are located inside a building, a door providing direct access from the exterior to the room containing such electrical shut off controls shall be provided, when required by the ~~Fire Marshal~~ *Fire Code Official*.

**609.1 General.** Commercial kitchen exhaust hoods shall comply with the requirements of the *International Mechanical Code* and *NFPA96 Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations*.

**901.2.1.3 901.2.2 Plan submittals.** Plan submittals shall be in accordance with the standard plan review format and shop drawings shall accompany construction documents at the time of second ~~initial~~ submittal, unless otherwise required.

**901.2.3 Site Plan.** Plans shall show the location of fire apparatus access roads, temporary signage, and water supply for fire protection as documented in Appendix D of this code. These plans shall be submitted for review and approval with the initial submittal of the building permit application.

**901.2.1.2 901.2.4 Plans for fire sprinkler systems.** Complete plans and hydraulic calculations for fire sprinkler system installation shall be submitted for review and approval prior to installation, modification or alteration. Plans shall be drawn to an indicated scale, on sheets of uniform size and shall show, as a minimum, the data required by NFPA 13. Manufacturer's cut sheets for all equipment used shall be included with the original submittal. Water supply data for hydraulic calculations shall be based on 90 percent of the available water supply as determined by flow test information. An additional copy of these plans shall be submitted in an electronic format suitable to the ~~Fire Marshal~~ *Fire Code Official*.

**901.2.1.4 901.2.5 Plan certifications for fire sprinklers.** Fire sprinkler plans submitted to the fire department for review and approval shall bear a review certification stamp and signature of an AZ *Arizona* Professional Design Registrant or Level III National Institute for the Certification of Engineering Technologies (NICET) in fire sprinkler systems.

**901.2.1.5 901.2.6 Plan certification for all other fire protection systems.** Plan certification for all other fire protection systems shall be accompanied by a certification of qualification when required. Shop drawings for all other fire protection systems shall accompany construction documents at the time of second submittal. Shop drawings for tenant improvement plans (TI's) shall accompany the initial submittal.



**901.2.1.6 901.6.7 Plan certification for fire alarms and occupant notification.** All fire alarm system plans submitted to the fire department for review and approval shall bear a review certification stamp and signature of an Arizona Professional Design Registrant or *Level III National Institute for the Certification of Engineering Technologies (NICET)* in Fire Alarm Systems. Plan certification for all fire alarm systems shall be accompanied by a certification of competence when required. Shop drawings shall accompany construction documents at the time of second submittal. Shop drawings for tenant improvement plans (TI's) shall accompany initial submittal.

**901.2.1.7 901.2.8 On site plans, specifications and permits.** Fire department approved plans, specifications and permits shall be retained on the job site, and made available to the fire inspector on each inspection.

**901.4.1.1 901.4.7 Fire Equipment Room.** The fire sprinkler riser assembly and the fire alarm control panel shall be installed inside the building with a door providing access into the fire equipment room. The fire equipment room shall be used for fire protection equipment and controls only. ~~The fire sprinkler riser shall be equipped with a listed double backflow prevention device sized to match piping.~~ The minimum size of the equipment room shall allow adequate firefighter access and mobility, and be measured not less than 36 inch radius around the riser and not less than 18 inches measured from the back or side of the riser nearest the wall.

**901.4.1.2 901.4.8 Electric horn and strobe.** A water-proof electric horn and strobe shall be installed on the exterior wall adjacent to the fire riser in lieu of the electric bell and/or water gong.

**901.4.2 Inspectors' test valve.** The Inspectors' Test Valve shall be located at the end of the most distant sprinkler pipe on each story and shall be equipped with a readily accessible brass shutoff valve and signage, ~~per the Surprise Fire Department Emergency Access Book.~~

**901.6 Inspection, testing and maintenance.** All fire and life safety systems including but not limited to: fire extinguishers, fire alarms, water supply and fire hydrant systems, backflow prevention devices, fire sprinklers and standpipes, chemical extinguishing systems and other types of automatic fire extinguishing systems, basement pipe inlets and other fire-protection systems and appurtenances shall be inspected, tested and maintained on an annual basis, after each use or as often as required by the ~~Fire Marshal~~ Fire Code Official to ensure operability by nationally recognized standards. Test records and tags shall be retained on site by the occupant of the building and a copy sent electronically to the City of Surprise Fire-Medical Department, Fire Prevention Division. The systems shall be inspected, tested and maintained by service personnel holding a valid certificate of qualification to perform service on listed fire protection and life safety systems in accordance with NFPA, Underwriters Laboratories, or Industry Manufacturers.

**901.6.2 Records.** ~~Records of all system inspections, tests and maintenance required by the referenced standards shall be maintained on the premises for~~

~~a minimum of three years and copied to the fire department electronically.~~

**901.6.2 Records.** Records of all system inspections, tests and maintenance required by the referenced standards shall be maintained on the premises for a minimum of three years and copied to City of Surprise Fire-Medical Department electronically.

**901.6.2.2 Submission timeline.** Every person or contractor performing repairs, inspections, tests, maintenance and/or observations on any fire protection system shall electronically forward itemized records of such work to the *Fire Code Official* within 15 days of completion.

**901.6.2.3 Submission method.** Records required to be electronically copied or filled pursuant to this section shall be filed as directed by the *Fire Code Official*, which direction may include using third party vendor and vendor's software.

~~**901.6.3 Professional Qualification.** To perform work on fire and life safety systems in the City of Surprise, all service personnel shall hold a valid "certificate of qualification" issued by NFPA, Underwriters Laboratories, or Industry Manufacturers. Fire sprinklers or alarms shall not be placed out of service for more than 8 hours in any 24 hour period, without authorization by the Fire Marshal.~~

~~**901.8.2 Use of fire hydrants during construction.** Use of fire hydrants for the purpose of site development must be approved by the Fire Marshal. The contractor shall request, in writing, approval to attach appliances to fire hydrants. Fire hydrants shall be inspected prior to water meter attachment, and during removal by the fire department.~~

**901.11 Resetting fire alarm systems.** No person shall reset a fire or emergency alarm system, alarm initiating device or component until the fire department arrives.

**Exception:** The person responsible for the property may investigate the building or area of alarm and if no evidence of fire or emergency is found, the system may be silenced providing the fire department is notified of the findings.

**903.2 Where required.** *Approved* automatic fire sprinkler systems shall be required in all new commercial structures and buildings for which a permit is required or issued. Installation of the sprinkler system shall be in accordance with the requirements of NFPA 13, unless otherwise approved by the ~~Fire Marshal~~ *Fire Code Official*.

~~Existing buildings, structures and occupancies will not require retrofitting fire sprinkler systems to current code standards unless:~~

- ~~1. Occupant load is increased without increasing square footage.~~

- ~~2. Occupancy classification is changed to a higher hazard~~
- ~~3. Building fire resistance rating is decreased.~~
- ~~4. Original building foot print (square footage) is increased 50% or more~~

**Exceptions:**

1. Detached gazebos, ramadas, restrooms, and guardhouses and utility vaults.
2. Detached non-combustible covered parking not exceeding 15,000 5,000 square feet with a minimum of 26 foot separation between covered structures.
3. Detached non-combustible canopies used exclusively for automotive, motor fuel- dispensing. Canopies where vehicles are attended, and in place on a temporary basis, for non-maintenance activities.
4. Detached non-combustible non-occupied water supply Booster Pump structures.

~~For the purposes of this section "TEMPORARY" is defined as any time period of less than 8 hours in any 24 hour time period.~~

**903.2.1.1 Group A-1.** An automatic sprinkler system shall be provided for Group A-1 occupancies. ~~where one of the following conditions exists:~~

- ~~1. The fire area exceeds 12,000 square feet (1115 m2).~~
- ~~2. The fire area has an occupant load of 300 or more.~~
- ~~3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.~~
- ~~4. The fire area contains a multi-theater complex.~~

**903.2.1.2 Group A-2.** An automatic sprinkler system shall be provided for Group A-2 occupancies. ~~where one of the following conditions exists:~~

- ~~1. The fire area exceeds 5,000 square feet (464 m2).~~
- ~~2. The fire area has an occupant load of 100 or more.~~

- ~~3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.~~

**903.2.1.3 Group A-3.** An automatic sprinkler system shall be provided for Group A-3 occupancies. ~~where one of the following conditions exists:~~

- ~~1. The fire area exceeds 12,000 square feet (1115 m<sup>2</sup>).~~
- ~~2. The fire area has an occupant load of 300 or more.~~
- ~~3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.~~

**903.2.1.4 Group A-4.** An automatic sprinkler system shall be provided for Group A-4 occupancies. ~~where one of the following conditions exists:~~

- ~~1. The fire area exceeds 12,000 square feet (1115 m<sup>2</sup>).~~
- ~~2. The fire area has an occupant load of 300 or more.~~
- ~~3. The fire area is located on a floor other than a level of exit discharge serving such occupancies.~~

**903.2.1.5 Group A-5.** An automatic sprinkler system shall be provided for Group A-5 occupancies in the following areas: concession stands, retail areas, press boxes and other accessory use areas. ~~in excess of 1,000 square feet (93 m<sup>2</sup>).~~

**903.2.2 Ambulatory care facilities.** An automatic sprinkler system shall be installed throughout the entire floor containing an ambulatory care facility. ~~where either of the following conditions exist at any time:~~

- ~~1. Four or more care recipients are incapable of self-preservation, whether rendered incapable by staff or staff has accepted responsibility for care recipients already incapable.~~
- ~~2. One or more care recipients that are incapable of self-preservation are located at other than the level of exit discharge serving such a facility.~~

~~In buildings where ambulatory care is provided on levels other than the level of exit discharge, an automatic sprinkler system shall be installed throughout the entire floor where such care is provided as well as all floors below, and all floors between the level of ambulatory care and the nearest level of exit discharge, including the level of exit discharge.~~

**903.2.3 Group E.** An automatic sprinkler system shall be provided for Group E occupancies. ~~as follows:~~

- ~~1. Throughout all Group E fire areas greater than 12,000 square feet (1115 m<sup>2</sup>) in area.~~
- ~~2. Throughout every portion of educational buildings below the lowest level of exit discharge serving that portion of the building.~~

**Exception:** ~~An automatic sprinkler system is not required in any area below the lowest level of exit discharge serving that area where every classroom throughout the building has at least one exterior exit door at ground level.~~

**903.2.4 Group F-1.** An automatic sprinkler system shall be provided throughout all buildings containing a Group F-1 occupancy, ~~where one of the following conditions exists:~~

- ~~1. A Group F-1 fire area exceeds 12,000 square feet (1115 m<sup>2</sup>).~~
- ~~2. A Group F-1 fire area is located more than three stories above grade plane.~~
- ~~3. The combined area of all Group F-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m<sup>2</sup>).~~
- ~~4. A Group F-1 occupancy used for the manufacture of upholstered furniture or mattresses exceeds 2,500 square feet (232 m<sup>2</sup>).~~

**903.2.4.1 Woodworking operations.** An automatic sprinkler system shall be provided throughout all Group F-1 occupancy fire areas that contain woodworking operations in ~~excess of 2,500 square feet in area (232 m<sup>2</sup>)~~ which generate finely divided combustible waste or which use finely divided combustible materials.

**903.2.5.3 Pyroxylin plastics.** An automatic sprinkler system shall be provided in buildings, or portions thereof, where cellulose nitrate film or pyroxylin plastics are manufactured, stored or handled in quantities exceeding 20 pounds (9 071 Kg) ~~100 pounds (45 kg).~~

**903.2.6 Group I.** An automatic sprinkler system shall be provided throughout buildings with a Group I fire area.

**Exceptions:**

- ~~1. An automatic sprinkler system installed in accordance with Section 903.3.1.2 shall be permitted in Group I-1 facilities.~~
- ~~2. An automatic sprinkler system installed in accordance with Section 903.3.1.3 shall be allowed in Group I-1 facilities when in compliance with all of the following:~~

- ~~2.1. A hydraulic design information sign is located on the system riser;~~
- ~~2.2. Exception 1 of Section 903.4 is not applied; and~~
- ~~2.3. Systems shall be maintained in accordance with the requirements of Section 903.3.1.2.~~
- ~~3. An automatic sprinkler system is not required where day care facilities are at the level of exit discharge and where every room where care is provided has at least one exterior exit door.~~
- ~~4. In buildings where Group I-4 day care is provided on levels other than the level of exit discharge, an automatic sprinkler system in accordance with Section 903.3.1.1 shall be installed on the entire floor where care is provided and all floors between the level of care and the level of exit discharge, all floors below the level of exit discharge, other than areas classified as an open parking garage.~~

**903.2.7 Group M.** An automatic sprinkler system shall be provided throughout buildings containing a Group M occupancy, ~~where one of the following conditions exists:~~

- ~~1. A Group M fire area exceeds 12,000 square feet (1115 m<sup>2</sup>).~~
- ~~2. A Group M fire area is located more than three stories above grade plane.~~
- ~~3. The combined area of all Group M fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m<sup>2</sup>).~~
- ~~4. A Group M occupancy used for the display and sale of upholstered furniture or mattresses exceeds 5,000 square feet (464 m<sup>2</sup>).~~

~~**903.2.8.1 Group R-3 or R-4 congregate residences.** A MOD. NFPA 13D sprinkler system shall be installed in accordance with Section 903.3.1.3 shall be permitted in Group R-3 or R-4 congregate living facilities. If any portion of a patio has habitable space directly above the patio, the patio shall be equipped with sprinkler protection.~~

**903.2.8.1 Assisted living facility.** Modified NFPA 13D sprinkler system shall be required to be installed in accordance with Section 903.3.1.3. If any portion of a patio has habitable space directly above the patio, the patio shall be equipped with sprinkler protection.

Such systems shall consist of an electronically supervised valve located between the domestic water riser control valve and the sprinklers, and include concealed spaces containing combustible materials, and shall be equipped with a electrically supervised

water flow switch and monitored by an approved Central Station, and shall sound an alarm at a constantly attended location inside the facility. The minimum listed electronic components for alarms shall consist of one auto dialer, and one interior horn/strobe and one exterior horn/strobe connected to the fire riser water-flow switch.

**Exceptions:**

1. Family Foster Homes and Foster Group Homes licensed by the State of Arizona Department of Economic Security.
2. Group Homes for the Developmentally Disabled, which when serves six or fewer residents and is licensed by the State of Arizona Department of Health Services.

~~**903.2.8.3 Group R, Division 3.** A Mod. NFPA 13D Residential Fire Sprinkler System shall be installed in Group R, Division 3 occupancies. If any portion of a patio or porch has habitable space directly above the patio or porch, the patio or porch shall have sprinkler protection.~~

~~**Exception:** Residential sprinklers may be omitted from Group R, Division 3 occupancies as long as the residence meets the required fire flows in accordance with Appendix B Table B105.1 Minimum Required Fire Flow and Flow Duration For Buildings.~~

~~**903.2.8.3.1 Sprinkle cost comparison.** The costs to install residential fire sprinklers shall be listed as one of the available options and show comparative installation costs.~~

~~**903.2.8.3.2 Display of fire sprinkler equipment.** The seller shall provide a full size display model of NFPA 13D automatic fire sprinkler system riser, control valves, and gauges in the sales office of each model home complex. A display model is not required if the sales office is equipped with a sprinkler system.~~

~~**903.2.8.3.3 Educational materials.** The seller shall provide each buyer with a copy of approved Fire Department educational material describing the benefits of a residential fire sprinkler system.~~

~~**903.2.8.3.4 Affidavit.** An affidavit signed by the buyer and the seller indicating a fire sprinkler option was offered and accepted, or refused shall be retained at the sales office and made available to the fire inspector for a period of one year from the date of transferring title to the buyer. A copy of the signed affidavit shall be attached to the application for permit.~~

~~**903.2.8.4**~~ **903.2.8.5 Special requirements for Group R-1 and R-2 occupancies.** Group R-1 and R-2 occupancies, sprinklers shall be installed in bathrooms, closet areas containing any electrical or mechanical equipment, foyers, and attached garages, accessible areas under interior stairs or landings, exterior balconies and

covered patios or landings which have habitable space directly above the balconies, patio or porch. In living spaces, sprinklers shall be the concealed type. For the purpose of inspection, testing, or maintenance, there shall be provided, at the time of construction, an exterior access door on the side of the building next to the fire sprinkler riser of adequate size to allow for valves and gauges to be accessed, repaired and viewed from the exterior for testing and maintenance purposes. The dimensions of the access door will depend on the design of the fire riser, controls and gauges. When necessary, access shall be provided through private dwellings or garages so service personnel can maintain the fire sprinkler riser and equipment.

**~~903.2.8.5 Special requirements for Group R-4 occupancies.~~** ~~R-4 occupancies, sprinklers shall be installed in bathrooms, closet areas containing any electrical or mechanical equipment, foyers, attached garages, and accessible areas under interior stairs or landings. State licensed facilities shall be equipped with an approved automatic sprinkler system in accordance with this code.~~

**903.2.9 Group S-1.** An automatic sprinkler system shall be provided throughout all buildings containing a Group S-1 occupancy. ~~where one of the following conditions exists:~~

- ~~1. A Group S-1 fire area exceeds 12,000 square feet (1115 m<sup>2</sup>).~~
- ~~2. A Group S-1 fire area is located more than three stories above grade plane.~~
- ~~3. The combined area of all Group S-1 fire areas on all floors, including any mezzanines, exceeds 24,000 square feet (2230 m<sup>2</sup>).~~
- ~~4. A Group S-1 fire area used for the storage of commercial trucks or buses where the fire area exceeds 5,000 square feet (464 m<sup>2</sup>).~~
- ~~5. A Group S-1 occupancy used for the storage of upholstered furniture or mattresses exceeds 2,500 square feet (232 m<sup>2</sup>).~~

**903.2.9.1 Repair garages.** An automatic sprinkler system shall be provided throughout all buildings used as repair garages. ~~in accordance with Section 406.8 of the International Building Code, as shown:~~

- ~~1. Buildings having two or more stories above grade plane, including basements, with a fire area containing a repair garage exceeding 10,000 square feet (929 m<sup>2</sup>).~~
- ~~2. Buildings no more than one story above grade plane, with a fire area containing a repair garage exceeding 12,000 square feet (1115 m<sup>2</sup>).~~
- ~~3. Buildings with repair garages servicing vehicles parked in basements.~~



- ~~4. A Group S-1 fire area used for the repair of commercial trucks or buses where the fire area exceeds 5,000 square feet (464 m<sup>2</sup>).~~

**903.2.9.2 Bulk storage of tires.** Buildings and structures where the area for the storage of tires exceeds ~~20,000 cubic feet (566 m<sup>3</sup>)~~ 10,000 cubic feet (283 m<sup>3</sup>) shall be equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

**~~903.2.8.6~~ 903.2.9.3 Special requirements for speculative warehouses.** Speculative warehouses shall comply with this Chapter, Chapter 23, and NFPA 13. The minimum sprinkler design in speculative warehouses shall be based upon a minimum ~~class IV~~ High Hazard commodity and maximum allowable storage height in the building. The system shall be hydraulically designed to protect the maximum possible clear height of storage without in-rack sprinklers and/or use an approved alternate design such as Early Suppression Fast Response (ESFR) sprinklers.

**~~903.3.7 Fire department connections.~~** ~~The location of fire department connections shall be approved by the fire code official. All signage shall be consistent with the Surprise Fire Department Emergency Access Book.~~

**~~906.1 Where required.~~** ~~Portable fire extinguishers shall be installed in the following locations.~~

**907.2 Where required – new buildings and structures.** All new commercial occupancies for which a building or construction permit is obtained shall ~~not~~ require full area smoke detection. ~~providing the building is equipped with a fully automatic fire sprinkler system.~~ Duct detection shall be required in accordance with *International Mechanical Code*. Full area notification shall be required and shall be addressable class A wiring. The fire riser flow switch shall be connected to and monitored by an approved monitoring company.

Self-storage facilities will not require the installation of smoke/heat detectors inside the storage compartment, but will require smoke detection in all common areas, and the installation of standpipes in stairwells in accordance with NFPA 13 and NFPA 14.

**~~907.4.2 Manual fire alarm boxes.~~** ~~Manual fire alarm boxes shall not be installed in occupancies where the building is equipped throughout with an approved automatic sprinkler system, unless otherwise required by the Fire Marshal.~~

**912.2.1 Visible location.** Fire department connections shall be located on the entrance side of the building, 36 inches (91 cm) above grade, fully visible and recognizable from the street or nearest point of fire department vehicle apparatus access or as otherwise *approved* by the Fire Marshal Fire Code Official.

**912.2.1.1 Fire department connection on buildings.** Fire department connection shall be indicated with an approved sign mounted 84 inches minimum of 7 feet (2133

mm) and maximum of 9 feet (2743 mm) above grade and recognizable from the street or nearest point of fire apparatus access.

**912.2.1.2 Remote fire department connection.** Remote fire department connection shall be indicated with an approved sign mounted 36 inches (91 cm) above grade and recognizable from the street or nearest point of fire apparatus access.

**912.2.2.1 Distance from Fire Hydrant.** The Fire Department Connection shall be located on the entrance side of the building within 150 feet (45 720 mm) of a fire hydrant

**912.2.3 Remote Fire Department Connection.** The remote Fire Department Connection shall be located on the entrance side of the building, outside the collapse zone and within 25 feet (7620 mm) of a fire hydrant

**912.4 Signs.** A metal sign with raised letters at least ~~1-inch (25 mm)~~ 2 inches (5 cm) in size shall be mounted on all Fire Department Connections serving ~~automatic fire sprinklers, standpipes or fire pump connections.~~ Such signs shall read: AUTOMATIC SPRINKLERS or STANDPIPES or TEST CONNECTION or a combination thereof as applicable. Where the fire department connection does not serve the entire building, a sign shall be provided indicating the portions of the building served. ~~All signage shall be consistent with the Surprise Fire Department Emergency Access Detail Book.~~ When a building is served by multiple Fire Department Connections, each connection shall be provided with an approved sign detailing the area of the building served by each connection.

**~~1016.2.2 Group F-1 and S-1 Increase.~~** ~~The maximum exit access travel distance shall be 400 feet (121 920 mm) \_in Group F-1 and S-1 occupancies where all of the following are met:~~

- ~~1. The portion of the building classified as Group F-1 or S-1 is limited to one story in height.~~
- ~~2. The minimum height from the finish floor to bottom of the ceiling or roof slab or deck is 24 feet (7315 mm); and~~
- ~~3. The building is equipped throughout with an automatic fire sprinkler system in accordance with Section 903.3.1.1 and Chapter 32 of this code.~~
- ~~4. Additional building access shall be provided in accordance with Sections 3206.6 through 3206.6.1.3 of this code.~~

**~~1016.2.2.1 Group F-1 and S-1 with a storage area greater than 500, 000 square feet.~~** ~~Group F-1 and S-1 with a storage area greater than 500, 000 square feet, a Technical Report shall be prepared by an Arizona Professional and shall be submitted to the Fire Marshal Fire Code Official for approval.~~

**1103.5.3 Retrofit.** An automatic sprinkler system shall be retrofitted into an existing building when:

1. Occupant load is increased without increasing square footage.
2. Occupancy classification is changed to a higher hazard.
3. Building fire resistance rating is decreased.
4. Original building foot print (square footage is increased 50% or more.

**1103.8.3.1 Smoke Alarm Replacement.** Where smoke alarms are permitted to be solely battery operated they shall be replaced with a UL listed smoke alarm with sealed 10-year lithium battery. Smoke alarm shall not remain in service longer than 10 years from the date of manufacture.

**5601.1.3 Fireworks.** Permissible Consumer *Fireworks* may be possessed, displayed for sale, and sold by licensed and permitted personnel regulated in accordance with the Arizona Revised Statutes and City of Surprise Municipal Code requirements.

**5608.1 Fireworks Displays and Pyrotechnic Permits.** Commercial fireworks may be possessed, stored, used and handled by authorized licensed fireworks shooter(s) documentation from the Bureau of Alcohol Tobacco & Firearms (BATF). Pre-squib all commercial fireworks prior to entering City limits. Permits for the public display of fireworks may be granted by the City of Surprise Fire-Medical Department, upon application and after proper inspection, in a manner that does not endanger persons, animals, or property. A permit ~~shall not be issued, and~~ may be revoked, during time periods of wind and/or High Fire Danger warnings. The ~~Fire Marshal, or designee~~ Fire Code Official, has the authority to impose conditions on any permits granted.

# 2012 International Fire Code Local Amendments

## Appendix C

### FIRE HYDRANT LOCATIONS AND DISTRIBUTION

**C102.1 Fire hydrant locations.** Fire hydrants shall be provided along fire apparatus access roads and adjacent public streets.

**C102.1.1 Construction site location.** A minimum of one approved fire hydrant capable of supplying the required fire flow shall be within a 400 foot (121 920 mm) radius of all combustibles.

# 2012 International Fire Code Local Amendments

## Appendix D

### FIRE APPARATUS ACCESS ROADS

**D102.1 Access and loading.** Facilities, buildings or portions of buildings hereafter constructed shall be accessible to fire department apparatus by way of an approved fire apparatus access road with an asphalt, concrete or other approved driving surface capable of supporting the imposed load for fire apparatus weighing at least 75,000 pounds (34 050 kg).

**D102.1.1 Temporary access.** Temporary fire department apparatus access road shall be provided prior to delivery of combustible material and/or vertical construction of structure(s).

**D103.1 Access road width with a hydrant.** ~~Where a fire hydrant is located on a~~ All fire apparatus access roads shall have a minimum road width ~~shall be~~ of 26 feet (7925 mm), exclusive of shoulders (see Figure D103.1).

**D103.1.1 Temporary access road specifications.** Fire department apparatus access road shall be a temporary all weather surface (TAWS) and comply with all of the following criteria:

1. Have an unobstructed width of not less than 26 feet (7925 mm) with a vertical clearance of not less than 15 feet (4572 mm).
2. This access surface shall be ABC compacted to 90% and capable of supporting fire apparatus in excess of 75,000 pounds (34 050 kg) gross vehicle weight (GVW) under any weather condition.
3. The temporary all weather surface (TAWS) shall be continuously maintained by the builder during the construction process.

**D103.3 turning radius.** The minimum turning radius shall be ~~determined by the fire code official~~ AASHTO SU-40.

**D103.4 Dead ends.** Dead-end fire apparatus access roads in excess of 150 feet (45 720 mm) shall be provided with width and turnaround provisions in accordance with Table D103.4.

**TABLE D103.4  
REQUIREMENTS FOR DEAD-END  
FIRE APPARATUS ACCESS ROADS**

<b>LENGTH (feet)</b>	<b>WIDTH (feet)</b>	<b>TURNAROUNDS REQUIRED</b>
0-150	<del>20-26</del>	None required
151-500 <u>750</u>	<del>20-26</del>	120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with Figure D103.1
501-750	20-26	<del>120-foot Hammerhead, 60-foot "Y" or 96-foot diameter cul-de-sac in accordance with Figure D103.1</del>
Over 750		Special approval required

For SI: 1 foot = 304.8 mm.

**D103.5 Fire apparatus access road gates.** Gates securing the fire apparatus access roads shall comply with all of the following criteria:

1. The minimum gate width shall be 20 feet (6096 mm).
2. Gates shall be of the swinging or sliding type.
3. Construction of gates shall be of materials that allow manual operation by one person.
4. Gate components shall be maintained in an operative condition at all times and replaced or repaired when defective.
5. Electric gates shall be equipped with approved traffic preemption devices and electronic Knox key switch as a means of opening the gate by fire department personnel for emergency access. Emergency opening devices shall be approved by the fire code official.
6. Manual opening gates shall not be locked with a padlock or chained and padlocked unless they are capable of being opened by means of forcible entry tools or ~~when a key box containing key(s) to the lock is installed at the gate location~~ approved Knox padlock, 3750 series.

7. Locking device specifications shall be submitted for approval by the fire code official.
8. Electric gate operators, where provided, shall be listed in accordance with UL 325.
9. Electric gates shall have battery backup.
10. Gates intended for automatic operations shall be designed, constructed and installed to comply with the requirements of ASTM F 2200.

**D103.6.3 Temporary access.** With the construction of the temporary access road, a temporary fire access sign shall be installed at the approved location and shall remain in place until completion of the construction.

**Exception:** Signage is not required for roads that have been permanently paved and have street name signs installed.

**D103.6.3.1 Sign specifications.** The temporary fire access sign shall comply with the following criteria:

1. The sign shall read FIRE DEPARTMENT ACCESS and shall include site address or range of addresses for all commercial construction sites and residential model homes site.
2. The sign shall be two sided 4 feet X 4 feet (1219 mm X 1219 mm) using ¾ inch (1.9 cm) graded plywood.
3. The sign shall have a red background with white FIRE DEPARTMENT ACCESS in 4 inch (10 cm) lettering.
4. The address shall be white 2 ½ inches (6.3 cm) ~~Handel~~ Gothic lettering.
5. A sign shall be installed at each point of entry.
6. The sign shall be 6 feet (1828 mm) above grade on posts set at a minimum of 2 feet (609 mm) below grade.